

**PATENT APPLICATION**  
**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of

Docket No: Q80002

Fumikazu SAITO, et al.

Appln. No.: 10/802,717

Group Art Unit: 1792

Confirmation No.: 5046

Examiner: Nicole R. Blan

Filed: March 18, 2004

For: PROBE PIN CLEANING DEVICE

**APPEAL BRIEF UNDER 37 C.F.R. § 41.37**

**MAIL STOP APPEAL BRIEF - PATENTS**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, Appellant submits the following:

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**I. REAL PARTY IN INTEREST**

The real party in interest is MITSUBISHI DENKI KABUSHIKI KAISHA the assignee of the present application. The assignment was recorded on March 18, 2004, at Reel 015122, Frame 0150.

## **II. RELATED APPEALS AND INTERFERENCES**

Upon information and belief, there are no other prior or pending appeals, interferences or judicial proceedings known to Appellant's Representative or the Assignee that may be related to, be directly affected by, or have a bearing on the Board's decision in the Appeal.

### **III. STATUS OF CLAIMS**

Claims 1-9 are all the claims pending in the application. Claims 1-3 and 7-9 stand finally rejected and are the subject of this Appeal. Claims 4-6 stand withdrawn from consideration.

**IV. STATUS OF AMENDMENTS**

Prior to the Final Office Action issued December 17, 2008, Appellant filed an Amendment Under 37 C.F.R. § 1.111 dated October 15, 2008. That Amendment was entered as a matter of right. Accordingly, there are no outstanding, non-entered amendments of the claims.

**V. SUMMARY OF THE CLAIMED SUBJECT MATTER**

The present invention relates to a non-contact probe pin cleaning device that cleans a probe pin fixed in a pin board. *See* Specification, p. 1 lines 6-9.

The concise description of the claimed subject matter of the present invention is set forth below with regard to each of the respective independent claims 1 and 7. Each of the following discussions includes reference to various portions of the present application to aid in the understanding of the invention. However, such reference, unless otherwise indicated, is intended to point out the described exemplary embodiment; it is not intended to limit the scope of the claims to only the express embodiment cited below.

**Claim 1**

Claim 1 relates probe pin cleaning device 1 having a fixing member 201 which fixes a probe pin 101. *See* Specification page 6, lines 1-5; FIGS. 1 & 2. The cleaning device also includes a cleaning container 3 which is configured to contain a cleaning solution 2. *See* Specification page 6, lines 6-8; FIG. 1. A supporting member 4 is placed on a bottom of the cleaning container 3 for supporting the fixing member 201. *See* Specification page 6, lines 7-9; FIG. 1. The supporting member 4 supports the fixing member 201 above the cleaning solution 2 such that a stylus portion of the probe pin 101 is immersed in the cleaning solution 2. *See* Specification page 7, lines 20-27; FIG. 1. Also included with the cleaning device 1 is an ultrasonic vibration generating means 7 for generating ultrasonic vibrations directed to the cleaning solution2. *See* Specification page 6, lines 14-20; FIG. 1. The generating means is shown in FIG. 1 and includes the an ultrasonic vibration generator 7. The vibration generator 7

may include a vibrator 9 provided with an internal room 8 formed between the bottom of the cleaning container 3 and the bottom of the external box 6; and an oscillator 10 electrically connected to the vibrator 9. *See* Specification page 6, lines 14-20; FIG. 1.

**Claim 7**

Claim 7 relates probe pin cleaning device 1 having a fixing member 201 which fixes a probe pin 101. *See* Specification page 6, lines 1-5; FIGS. 1 & 2. The cleaning device also includes a cleaning container 3 which is configured to contain a cleaning solution 2. *See* Specification page 6, lines 6-8; FIG. 1. A supporting member 4 is placed on a bottom of the cleaning container 3 for supporting the fixing member 201. *See* Specification page 6, lines 7-9; FIG. 1. The supporting member 4 supports the fixing member 201 above the cleaning solution 2 such that a stylus portion of the probe pin 101 is immersed in the cleaning solution 2. *See* Specification page 7, lines 20-27; FIG. 1. Also included with the cleaning device 1 is an ultrasonic vibration generator 7 which generates ultrasonic vibrations directed to the cleaning solution2. *See* Specification page 6, lines 14-20; FIG. 1.

**VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

(1) Claims 1-2 and 7-8 stand rejected under § 103(a) as being unpatentable over TeleChem, in view of Lord (US 4,442,852) in further view of Ferrell (US 5,505,785).

(2) Claims 3 and 9 stand rejected under § 103(a) as being unpatentable over TeleChem in view of Ferrell and Lord, and in further view of Jackson (David P. Jackson, *Centrifugal Shear Carbon Dioxide Cleaning* (Precision Cleaning '95 Proceedings)).



## **VII. ARGUMENT**

Appellants respectfully submit the present rejections are in error as set forth below.

In sum, the Examiner relies on the “Telechem” reference as disclosing that its floatable pin cleaning rack discloses the recited “support member placed on a bottom of the cleaning container for supporting the fixing member. In contrast to the Examiner’s interpretation, the Telechem reference only discloses that its floatable pin cleaning rack floats above the bottom of the bath. In fact, the Telechem reference expressly teaches that to avoid damage to the Ultrasonic Bath, do not operate the bath with cleaning volumes less one liter to make sure nothing is resting on the bottom of the tank. In this way, the Telechem reference discourages and discredits the Examiner’s unsupported contention that this reference discloses the legs of the support member hold the fixing member above the bottom of the tank.

Appellants address each rejection in detail below.

### **Claim Rejections - 35 U.S.C. § 103(a)**

The Examiner rejected claims 1-2 and 7-8 under § 103(a) as being unpatentable over TeleChem, in view of Lord (US 4,442,852) in further view of Ferrell (US 5,505,785).

Appellants traverse this rejection for the reasons set forth below.

Appellants submit the applied combination fails to disclose “a supporting member placed on a bottom of the cleaning container for supporting the fixing member; and an ultrasonic vibration generating means for generating ultrasonic vibrations directed to the cleaning solution,” as recited in claim

1.

In the rejection, the Examiner solely relies on Telechem as disclosing this feature.

Conversely, Telechem fails to disclose and actually teaches away from any such feature.

Following the claim amendments submitted in the Amendment 1.111 filed October, 16, 2008, Appellants have submitted that the applied combination fails to disclose this feature. The Examiner's rebuttals are reflected by the comments in the Response to Arguments section of the Final Office Action of December 17, 2008. In this Office Action, the Examiner makes several comments which directly contrast with the express disclosure of the Telechem reference. In particular, the Examiner asserts:

- (1) Telechem teaches in Figures 1 and 2 that the legs of the support member hold the fixing member above the bottom of the tank; and
- (2) The Examiner is well aware that TeleChem suggests placing a certain amount of solution into the tank to prevent damage; however, this does not take away from the fact that the tank is able to have less than the amount of cleaning solution suggested as taught by the Telechem reference. Therefore, Telechem teaches the supporting member supports the fixing member above the cleaning solution so that a stylus portion of the probe pin is immersed in the cleaning solution.

*(Office Action, pp. 2-3).*

Consequently, the Examiner is improperly asserting that Telechem discloses a support member placed on the bottom of the cleaning container for supporting the fixing member. The Examiner's contention is improper because: (1) Telechem fails to disclose any such feature; and (2) Telechem teaches away from using an amount of solution which is less than that which is required to keep the floatable rack floating.

First, Telechem expressly discloses that nothing contacts the bottom of the tank. Rather, FIG. 1 shows the floatable rack before being inserted into the Ultrasonic Bath, and therefore,

cannot show this feature. Rather, FIG. 1 shows the purpose of the legs which is to support the rack when positioned outside of the Ultrasonic Bath. Moreover, Telechem expresses that the **floatable rack** floats in the solution. (p. 3-9 of Telechem). This express disclosure is in direct contrast to the recited “support member placed on the bottom of the cleaning container.” Finally, FIG. 2 merely shows the floatable rack floating on the surface of the Ultrasonic Bath.

Second, it would not be obvious to modify Telechem’s floatable rack to rest on the bottom of the cleaning container by lowering the solution level because Telechem *expressly teaches away* from such a modification. In particular, Telechem discloses that the pin cleaning rack is a **floating** rack, thus it is designed to float above the bottom surface. (p. 3-9 of Telechem). Further, Telechem discloses that the ultrasonic bath is filled with liquid before the floating rack is placed in the ultrasonic bath. (p. 3) Finally, **Telechem discloses that the ultrasonic bath should not be operated with cleaning volumes that permit something to rest on the bottom of the tank or the Ultrasonic Bath may be damaged.** (p. 3). Notably, Telechem expressly teaches that this damage will result from something resting on the bottom of the tank. (*Id.*). In this way, Telechem discourages and discredits any modification that would result in the floatable rack resting on the bottom of the Ultrasonic Bath.

Consequently, Telechem’s disclosure is in direct contrast to the Examiner’s position regarding anything resting on the bottom of the bath and operating the bath with less than the amount of cleaning solution suggested. Because Telechem expressly teaches away from these features, Appellants also submit one of ordinary skill in the art would not modify Telechem to

have these features. Rather, based on Telechem's express teaching away, one of ordinary skill in the art would not find the requisite likelihood of success to make such a modification.

In conclusion, TeleChem's fixing member (*see* p. 4) is not fixed above the cleaning solution, rather, TeleChem's pins are placed in a floatable pin cleaning rack. (p. 3, fig. 2). As illustrated in figure 2, this floating pin cleaning rack floats on the surface of the cleaning solution. Consequently, there is no supporting member which supports the floatable pin cleaning rack above the cleaning solution. Additionally, because the pin cleaning rack is floatable, it is not placed on the bottom of the cleaning container. Furthermore, because Ferrell and Lord fail to disclose any supporting member which supports a fixing member above a cleaning solution, even if TeleChem, Ferrell and Lord are combined as suggested by the Examiner, the suggested combination fails to disclose all the features recited in claim 1.

Thus, Appellants respectfully submit claim 1 is allowable for at least this reason. Additionally, Appellants submit claims 2 and 8 are allowable, at least by virtue of their dependency. Finally, because claim 7 recites a feature similar to the feature argued above with regard to claim 1, Appellants submit claim 7 is allowable for the same reason set forth above.

**Claim Rejections - 35 U.S.C. § 103(a)**

The Examiner rejected claim 3 and 9 under § 103(a) as being unpatentable over TeleChem in view of Ferrell and Lord, and in further view of Jackson (David P. Jackson, *Centrifugal Shear Carbon Dioxide Cleaning* (Precision Cleaning '95 Proceedings)).

Appellants respectfully submit because Jackson, either taken alone or in combination with TeleChem, Ferrell and Lord, fails to compensate for the TeleChem/Ferrell/Lord

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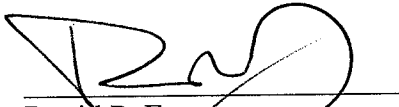
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combination as applied to claims 1 and 7, claims 3 and 9 are allowable, at least by virtue of their dependency.

**Conclusion**

The USPTO is directed and authorized to charge the statutory fee (37 C.F.R. §41.37(a) and 1.17(c)) and all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

  
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**23373**

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**CLAIMS APPENDIX**

CLAIMS 1-3 and 7-9 ON APPEAL:

1. A probe pin cleaning device comprising:

a fixing member for fixing a probe pin;

a cleaning container for containing a cleaning solution;

a supporting member placed on a bottom of the cleaning container for supporting the fixing member; and

an ultrasonic vibration generating means for generating ultrasonic vibrations directed to the cleaning solution,

wherein the supporting member supports the fixing member above the cleaning solution such that a stylus portion of the probe pin is immersed in the cleaning solution.

2. The probe pin cleaning device according to Claim 1, wherein the cleaning solution includes ethyl alcohol.

3. The probe pin cleaning device according to Claim 2, comprising an ultraviolet irradiating means for irradiating the stylus portion of the probe pin with ultraviolet rays for detecting the presence or absence of a foreign particle on the stylus portion.

7. A probe pin cleaning device comprising:

a fixing member for fixing a probe pin;

a supporting member placed on the bottom of the cleaning container for supporting the fixing member;

a cleaning container for containing a cleaning solution; and

an ultrasonic vibration generator which generates ultrasonic vibrations directed to the cleaning solution,

wherein the supporting member supports the fixing member above the cleaning solution such that a stylus portion of the probe pin is immersed in the cleaning solution.

8. The probe pin cleaning device according to Claim 7, wherein the cleaning solution includes ethyl alcohol.

9. The probe pin cleaning device according to Claim 8, comprising an ultraviolet irradiator which irradiates the stylus portion of the probe pin with ultraviolet rays for detecting the presence or absence of a foreign particle on the stylus portion.

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**EVIDENCE APPENDIX:**

Pursuant to 37 C.F.R. § 41.37(c)(1)(ix), submitted herewith are copies of any evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 or any other evidence entered by the Examiner and relied upon by Appellant in the appeal.

None.



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**RELATED PROCEEDINGS APPENDIX**

Submitted herewith are copies of decisions rendered by a court or the Board in any proceeding identified about in Section II pursuant to 37 C.F.R. § 41.37(c)(1)(ii).

None.